

Sustainability

BrainLit's goal is to improve life through BioCentric Lighting™. We see ourselves as a change agent in the lighting industry, focusing on all three aspects of light (visual, emotional, biological). We take pride in acting responsibly in everything we do, helping customers to improve their lighting environments in sustainable ways. We agree with the United Nations 17 Sustainable Development Goals¹, also referred to as Agenda 2030, following a set of guidelines to help us act in a sustainable manner when it comes to the social, economic and climate aspects of creating growth in responsible ways.

BrainLit's sustainability efforts support the future environmental certifications of buildings through lighting plans that meet the requirements of European standard EN-12464-1², which highlights the minimum illuminance requirements of indoor working areas to meet the needs for visual comfort and performance of people having normal visual capacity. The standard takes into account the Unified Glare Rating (UGR), lux values, and color rendering (Ra) of a lighting solution for a working area.

BrainLit luminaires meet EU requirements and the Ecodesign Directive³ by being registered in the European Product Database for Energy Labeling (EPREL) database⁴. The EU Ecodesign Directive aims to achieve more efficient energy use in new products. Together with the Energy Labeling Directive, these regulations drive the development of light sources and luminaires towards more energy-efficient products and a reduced environmental impact. BrainLit is also in the process of implementing both ISO9001 quality management and ISO14001 environmental management systems to further optimize its environmental footprint and impact.

BRAINLIT LUMINAIRES

BrainLit's BioCentric luminaires are developed to achieve the optimum balance between maximum circadian impact and maximum energy efficiency.

CIRCADIAN EFFICIENCY

Circadian efficiency is a measure of the biological influence of light on the human sleep/wake cycle and is measured as a percentage relative to standard daylight (Daylight Efficacy Ratio, or DER). A high DER value means a stronger impact, which is desirable during the morning and daytime. In the evening, a high circadian influence should be avoided, to promote better sleep. BrainLit luminaires achieve a large range of between 18-108% relative circadian efficiency (DER) in a single luminaire.

ENERGY EFFICIENCY

Energy efficiency is most often expressed as light exchange in lumens/Watts (lm/W). Our BCL luminaires today reach as far up as 110lm/W at CRI 90 and 2700K. Our next generation light sources, now under development, extend beyond these limits both in terms of circadian impact and energy efficiency.

1.) <https://sdgs.un.org/goals>

2.) <https://www.iea.org/policies/7034-en-12464-12011-lighting-of-work-places>

3.) https://ec.europa.eu/growth/industry/sustainability/sustainable-product-policy-ecodesign_en

4.) https://ec.europa.eu/info/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/energy-label-and-ecodesign/product-database_en

ENVIRONMENTAL CERTIFICATIONS AND STANDARDS

BrainLit collaborates with contractors and property owners in planning and implementing its lighting solutions to comply with a variety of environmental certifications, depending on the building owner's or tenants' needs, such as LEED, BREEAM, and the WELL standard. BrainLit continuously works to improve the energy efficiency of our luminaires by utilizing optimal LED technology and smart solutions for light control.



WELL STANDARD

The WELL standard⁵ is a certification program that aims to set a standard for buildings, interior spaces and communities seeking to implement, validate and measure features that support and advance human health and wellness. The WELL standard focuses on the areas of air, water, diet, exercise, light, comfort and well-being.

The highest lighting requirement of the WELL standard is 250 vertical lux mEDI (melanopic Equivalent Daylight Illuminance). With BrainLit's basic BCL700 level solution, we deliver 700 photophysical lux, which is horizontally equivalent to 233 photophysical lux and 253 lux mEDI at the cornea*. With our BCL900 and BCL1100 solutions, we further exceed the WELL standard to reach a much wider population.



BREEAM

BREEAM⁶ is a global sustainability assessment method for masterplanning projects, infrastructure and buildings. It highlights the need for zoning (of a maximum of four workplaces) in order to meet a reasonable degree of control for a user over his or her own workspace. BREEAM recommends that higher numbers can be justified based on current lighting strategy**. Different areas of activity such as teaching areas, libraries, dining rooms, auditoriums, etc. are also zoned.



LEED

LEED⁷ is an environmental certification system from the U.S. Green Building Council that, like BREEAM, covers areas of land use, energy use, water use, choice of materials, indoor environment, transportation, degree of innovation and waste. The total assessment may result in Certified, Silver, Gold or Platinum. LEED includes lighting under the Interior Lighting category.

*CS and EDI values assumes 1/3 illuminance level at the cornea compared to the horizontal plane

**BREEAM 6.0 Health and well-being, Hea 01 Visual comfort, CN3.13 p.96

5.) <https://legacy.wellcertified.com/en>

6.) <https://www.breeam.com/>

7.) <https://www.usgbc.org/leed>